



Dart Hawkesbury
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D4004-043
Job Sheet 168483



Part No: D4004-043

Job Qty: 2 ea

Part Name: Side Restraint Angle And Tie Down Point



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/15/17

Job Tracking No:

Due Date: 11/24/17

Created By: Sylvie Boucher

Type: Stock

Description:

Note: DWG REV B SHEETS 2,9,10 IPP rev A 09.12.15 new issue Prelim EC verified by:DD IPP Rev:B 10.05.17 as per ECN10-562 DD verf: IPP Rev:C 12.03.07 as per dwg rev.b DD verf: EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	2 Ea		11/23/17	0.00	0.00	Start Up Waterjet		
100	Waterjet	2 pcs		11/23/17	0.00	0.12	Waterjet1		
110	QC	2 pcs		11/23/17	0.00	0.00	QC2		
120	QC	2 pcs		11/23/17	0.00	0.00	QC8		
130	Brake NC	2 pcs		11/23/17	0.00	0.32	Brake NC 2		
140	QC	2 pcs		11/23/17	0.00	0.00	QC5		
150	HandFinish	2 pcs		11/23/17	0.00	0.11	HandFinish1		
155	QC	2 pcs		11/23/17	0.00	0.00	QC7		
160	Powdercoat	2 pcs		11/23/17	0.00	0.05	Powdercoat9		
170	QC	2 pcs		11/23/17	0.00	0.00	QC3		
180	Small Fab	2 pcs		11/24/17	0.00	0.39	Small Fab		
190	QC	2 pcs		11/24/17	0.00	0.00	QC5		
200	Packaging	2 pcs		11/24/17	0.00	0.00	Packaging3		
210	QC21-SA	2 Ea		11/24/17	0.00	0.00	QC21		

Part Op 100 - 1-Cut as per Dwg (D4004-9) Dwg Rev: B Prog Rev: B 2-Deburr if necessary

Descriptions: 130 - 1- Bend D4004-9 as per Dwg 2- C'sink as per dwg

160 - Start Time: 7:00 Oven Temperature: 320 Finish Time: 8:20 PM 12/28/17

180 - Assemble as per dwg

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M2024T3S.063	0	309	0	0
180-Small Fab	D4004-7 F122491-40	2	15	0	0
	MS20426AD4-4 F125445-4	2	2,072	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS				
Part No. _____		Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	
NCR No. _____		Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	
		Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	
	Large Fab ☐	Composite ☐	Supplier ☐			
Date : _____	Step #: _____	QTY Effective : _____			MRB (QS1042) Approval	

Description Work Order Deviation	Disposition
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Completed By _____ and / Supervisor _____ Revision: _____ Operation: _____ Change No: _____	
PART NO: _____ Coordinator approval _____	

Root Cause		Pressure/For	
Environment ☐	No Re-verification ☐	Bending ☐	ed Wrong
Design ☐	Operator ☐	Centre Not C ☐	Dimensions
Doc/Data ☐	Offset/Setup ☐	Cracks ☐	der tolerance
Equip/Tooling ☐	Supplier ☐	Crimp/Kink/Ri ☐	rrect
Handling/Pre ☐	Training ☐	Cuffs ☐	'Missing
Material ☐	Use for Testing ☐	Crushing ☐	ed
Internal Transport ☐	Poor Information ☐	Heat Treat ☐	Drawing
Tribal Knowledge ☐	Rushing ☐	Wave/Twist in Tube ☐	Finish
LOA ☐	Product Improvement ☐	Marks/Chatter ☐	Misread
Substation ☐	Process Improvement ☐	Drill Holes ☐	Turning Sequence
Past Expiry Date ☐	Manufacturing Process ☐		
Misidentified ☐	Past Due ☐	OTHER : _____	

Job No: 168483
Mfg Date: 11/16/17

Start up Operation

D4004 - 043

Side Restraint Angle And Tie Down Point



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

☐ Mislabeled	☐ Drawing
☐ Fit/Function	☐ Finish
☐ Misaligned/off center	☐ Misread
	☐ Turning Sequence

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

DQA: _____ Date: _____



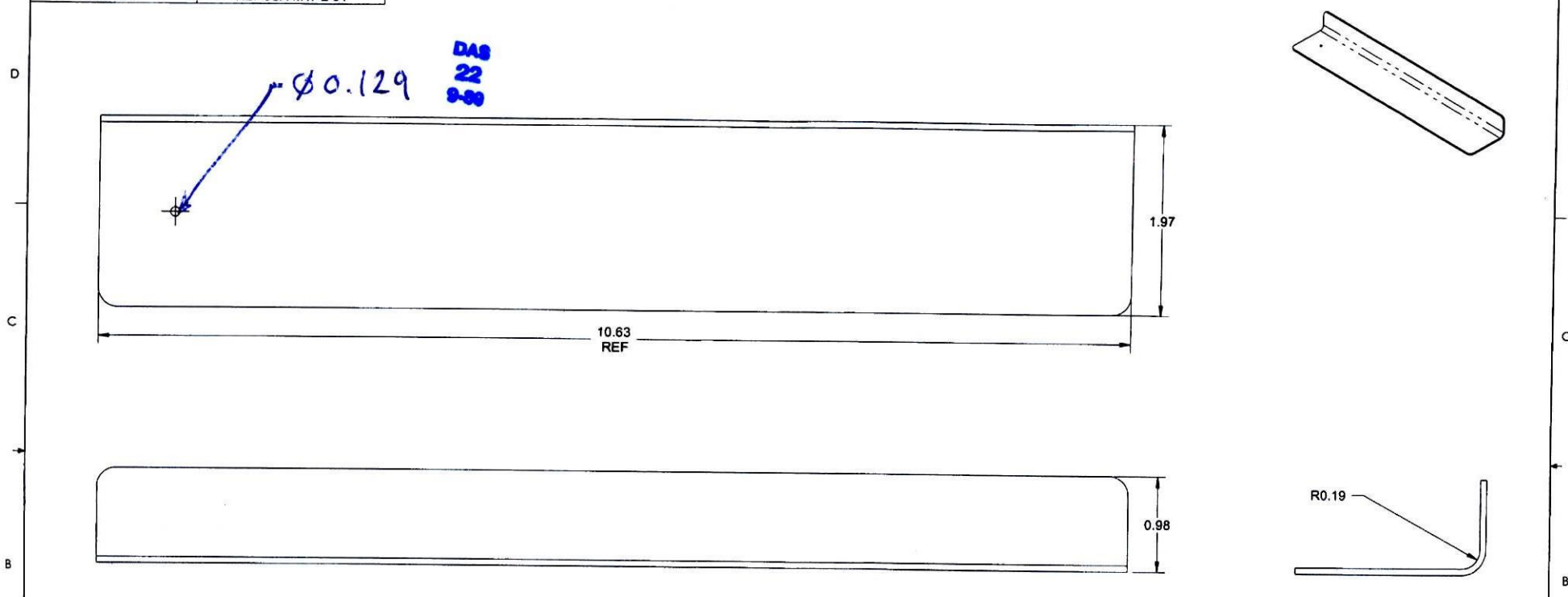
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mis-labeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

DART AEROSPACE PART NUMBER	JOHN CAMERON AVIATION PART NUMBER
D4004-9	REF JCA-M47-2-04



D4004-9 ANGLE

NOTES:

- 1) MATERIAL: MADE FROM D4004-9F
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.18 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4004	SHEET 9 OF 11
APPROVED		TITLE	SCALE
DE APPR.		SIDE RESTRAINT	NTS
DATE	12.02.27	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Description Work Order Deviation				Disposition				Completed By																	
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